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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/645,613

08/22/2003

Shunpei Yamazaki

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31780

7590

11/02/2005

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EXAMINER

DUONG, TAI V

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.D

Office Action Summary	Application No.		Applicant(s)	
	10/645,613		YAMAZAKI ET AL.	
	Examiner		Art Unit	
	Tai Duong		2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 08/024,946.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recited feature " a transparent material having a cured portion and an uncured portion wherein said uncured portion is disposed under said black coating" of claims 1, 5, 10, 16 and 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The obviousness-type double patenting rejection and the 35 U.S.C. 103 rejections over JP 04-251220 (JP'220) in the last Office action are withdrawn in view of the filing of the English translation of the foreign priority paper.

However, upon reconsideration, the JP 04-251220 (JP'220) is not necessary for the obviousness-type double patenting rejection and the 35 U.S.C. 103 rejections because the recited features "a transparent material having a cured portion and an uncured portion, wherein said cured portion surrounds said liquid crystal, wherein said uncured portion is disposed under said black coating" are *inherently* associated with polymer dispersed liquid crystal devices having a black coating formed on one of the substrates. The JP'220 and the newly cited Yoshida et al (US 5,566,008, col. 1, line 65 – col. 2, line 22) are cited for showing evidences to support for the above inherent features associated with polymer dispersed liquid crystal devices having a black coating formed on one of the substrates.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,618,105 in view of Iwai et al .

The only difference between the instant claims and the patent claims is the omission of the feature "wherein a thickness of said layer is 2.5-10 μm " from the patent claims, and the added feature "black stripes comprising the black coating are formed between the layer and the second substrate". Iwai et al disclose in Fig. 3 that it was known to employ black stripes 18 comprising the black coating being formed between the liquid crystal layer 4 and the second substrate 17 for protecting the semiconductor layer of the TFT from being exposed to a direct incident light (col. 4, lines 13-27 and 52-58).

It is inherent with polymer dispersed liquid crystal devices having black matrix or black stripes that the cured portion surrounds said liquid crystal and the uncured portion is disposed under the black coating (black matrix or black stripes). Thus, it would have been obvious to a person of ordinary skill in the art in view of Iwai et al to employ of black stripes comprising the black coating being formed between the liquid crystal layer and the second substrate in the patent claims for protecting the semiconductor layer of the TFT from being exposed to a direct incident light. Also, it would have been obvious to a person of ordinary skill in the art to omit the thickness detail of the liquid crystal (LC) layer of the liquid crystal display (LCD) device of the patent claims when such detail is not critical for the LCD device.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al in view of JP 62-178905.

The only difference between the LCD device of the instant claims and that of Kimura et al is black stripes comprising the black coating being formed between the liquid crystal layer and the second substrate. See discussions of Kimura in the previous Office action. The JP 62-178905 discloses in Fig. 1 and the abstract that it was known to employ black stripes 3 comprising the black coating being formed between the liquid crystal layer and the second substrate *in combination with* the substrate of MIM (first substrate). It is inherent with polymer dispersed liquid crystal devices having black matrix or black stripes that the cured portion surrounds said liquid crystal and the uncured portion is disposed under the black coating (black matrix or black stripes). Thus, it would have been obvious to a person of ordinary skill in the art in view of JP 62-178905 to employ black stripes comprising the black coating being formed between the liquid crystal layer and the second substrate in the LCD device of Kimura et al for providing good light shielding at locations between adjacent pixels thereby improving the display contrast.

Claims 10-15 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakai et al (US 5,003,356) in view of Kobayashi et al (US 5,305,126) and Iwai et al .

Wakai et al disclose in Figs. 3 and 5 a LCD device, similar to that of the instant claims, including a smoothing film 108 (col. 4, lines 15-20). The only differences between the LCD device of Wakai and that of the instant claims are a liquid crystal (LC) being dispersed in a transparent resin (polymer dispersed liquid crystal, PDLC), and black stripes comprising the black coating being formed between the liquid crystal layer and the second substrate. Kobayashi et al disclose in the Sixth Embodiment that it was known to employ a LCD device comprising thin film transistors (TFTs) and PDLC (col. 16, line 25 – col. 17, line 52). Further, Kobayashi et al disclose that the optimum amount of the LC employed in the mixture is in the range between 50% and 97% (col. 17, lines 17-19). Iwai et al disclose in Fig. 3 that it was known to employ black stripes 18 comprising the black coating being formed between the liquid crystal layer 4 and the second substrate 17 for protecting the semiconductor layer of the TFT from being exposed to a direct incident light (col. 4, lines 13-27 and 52-58). It is inherent with polymer dispersed liquid crystal devices having black matrix or black stripes that the cured portion surrounds said liquid crystal and the uncured portion is disposed under the black coating (black matrix or black stripes). . Thus, it would have been obvious to a person of ordinary skill in the art in view of Kobayashi et al to employ a PDLC with a mixture ratio of the LC and the transparent resin being 4:6 to 8:2 in Wakai's LCD device for obtaining a bright display device with good response to the applied electric field and

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good contrast. Also, it would have been obvious to a person of ordinary skill in the art in view of Iwai et al and JP'220 to employ black stripes comprising the black coating being formed between the liquid crystal layer and the second substrate in Wakai's LCD device for protecting the semiconductor layer of the TFT from being exposed to a direct incident light.

Claims 16-24, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al'945 in view of Applicant's Prior Art Admission (APAA), JP 62-178905.

The only difference between Kimura's LCD device and of the instant claims is the LCD having a memory property. See discussions of Kimura in the previous Office action. As is well-known in the art, ferroelectric and antiferroelectric LC devices have a memory property (see Jono et al, US 5,078,477, cited by Applicant). APAA discloses that a PDLC device using a ferroelectric LC material is known (specification, page 7, lines 12-21). The JP 62-178905 discloses in Fig. 1 and the abstract that it was known to employ black stripes 3 comprising the black coating being formed between the liquid crystal layer and the second substrate *in combination with* the substrate of MIM (first substrate). It is inherent with polymer dispersed liquid crystal devices having black matrix or black stripes that the cured portion surrounds said liquid crystal and the uncured portion is disposed under the black coating (black matrix or black stripes).. Thus, it would have been obvious to a person of ordinary skill in the art in view of APAA to employ a ferroelectric LC material as the LC in the PDLC display device of Kimura et al for obtaining a display device having a memory property and rapid response. Also, it

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would have been obvious to a person of ordinary skill in the art in view of JP 62-178905 to employ black stripes comprising the black coating being formed between the liquid crystal layer and the second substrate in the LCD device of Kimura et al for providing good light shielding at locations between adjacent pixels thereby improving the display contrast.

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

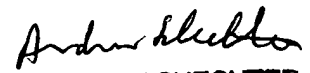
Any inquiry concerning this communication should be directed to Tai Duong at telephone number (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

TD

TVD

10/05


ANDREW SCHECHTER
PRIMARY EXAMINER